

REMARKS

This Preliminary Amendment modifies the Request for Continued Examination (RCE) filed herewith. With this Preliminary Amendment, claims 1-3, 6-8, 13, 15-19, 21-24, 26-29, and 31-37 have been amended, claims 39-42 have been added, and claims 4-5, 25, 30, and 38 have been canceled without prejudice. Claims 1-3, 6-24, 26-29, 31-37, and 39-42 therefore, are presented for consideration and allowance. No new matter has been introduced in these claim amendments.

Rejections

Rejection Under 35USC Section 103

Claims 1-3, 6-13, 15, 21-24, 26-29, and 31-35 have been rejected under 35 USC Section 103(a), as being unpatentable over U.S. patent 5,663,750 to Sakuma ("Sakuma") in view of published U.S. patent application 2002/0060801 by Motamed et al. ("Motamed"). Applicants respectfully traverse the rejection and request reconsideration based on the amendment to claims 1-3, 6-8, 13, 15, 21-24, 26-29, and 31-35, and features in the claims which are neither disclosed nor suggested in the cited references, taken either alone or in combination.

As to a rejection under 103(a), the U.S. Patent and Trademark Office ("USPTO") has the burden under section 103 to establish a *prima facie* case of obviousness by showing some objective teaching in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. See In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Manual of Patent Examining Procedure (MPEP) section 2143 discusses the requirements of a *prima facie* case for obviousness. That section provides as follows:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach

or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and reasonable expectation of success must be found in the prior art, and not based on applicant's disclosure.

In the present case, the applied references do not teach or suggest all of Applicant's claim limitations, and there is no suggestion or motivation to modify the reference or to combine reference teachings.

Independent claim 1 (amended), and its dependent claims 2-3, 6-12, and 39-40, are patentably distinguishable over the cited references because claim 1 emphasizes the novel features of the present invention which ascertain the resource requirements of a print job by analyzing a portion of a document formatted in print format. In this regard, claim 1 recites:

"1. A method for ascertaining resource requirements of a print job sent to a printer via a print driver, the method including:

creating a document of the print job with the print driver and reading the print job into memory directly from the print driver;

formatting the document in the memory into a print format consistent with a layout of the document on print media, the formatted document having a document area;

overlaying a sample window over a portion of the formatted document in the memory, the window having a window area smaller than the document area;

analyzing the portion of the formatted document overlayed by the sample window to determine resource requirements of the portion; and

ascertaining the resource requirements of the print job based on the resource requirements of the portion." (emphasis added)

The novel features of the present invention are neither taught nor suggested by the Sakuma and Motamed references, either alone or in combination, in that the limitations of overlaying a sample window in memory over a portion of a document formatted in a print format consistent with the layout of the document on print media, where the area of the sample window is smaller than the area of the entire document, are absent from the references.

The Sakuma reference discloses ink estimation. As is described in the Sakuma reference:

"A memory 22 for storing text data is connected to the controller 20. The text data stored in the memory 22 is transmitted to the display 3 where it is displayed. When a print start command is transmitted, the controller 20 calculates the amount of ink that will be

consumed to print text data stored in the memory 22. The controller 20 makes this calculation by first developing all the text data into bit pattern data. The bit pattern data is then temporarily stored in a bit pattern memory 22a that is also connected with the controller 20. Then, the total number of dots in the bit pattern memory 22a is calculated. The volume of ink per dot (a previously known value) is multiplied to the total number of dots to obtain the amount of ink that will be consumed to print the text data stored in the memory 22. Further, the number of times suction operations will be performed during printing of the text data is calculated beforehand to determine an (sic) total amount of ink consumed during suction operations. The amount of ink to be consumed during suction operations is added to the amount of ink to be consumed in printing the text data to obtain the total amount of ink.

An alternative calculation method for word processors that have no bit pattern memories is to determine (sic) the total number of characters printed based on the amount of capacity consumed in the memory 22. The total amount of ink to be consumed can then be determined by multiplying the average amount of ink consumed for printing one character to the total number of characters. Alternatively, the total number of pages printed can be calculated and the average amount of ink consumed for printing each page can be multiplied to the result.” (col. 4, line 39 – col. 5, line 2; emphasis added)

Significantly, the Sakuma reference discloses two alternative methods for estimating ink consumption. In the first method, where a bit pattern memory is available, all the text data is developed into bit pattern data, and the total number of dots for all the bit pattern data is calculated. There is no teaching or suggestion to overlay a sample window over only a portion of the bit pattern data in memory, analyze the number of dots in the portion, and then ascertain the overall ink requirement from the portion, as is recited in Applicants’ claim 1.

In the second, alternative method, where a bit pattern memory is not available, the Sakuma reference teaches multiplying the average amount of ink needed to print one character by the total number of characters in order to estimate the overall ink requirement. However, without the bit pattern memory it is not possible to format the document in the memory into a print format consistent with a layout of the document on print media, as recited in Applicants’ claim 1.

Furthermore, there is no teaching or suggestion in the Sakuma reference that the two methods could be combined into a single method. In fact, Sakuma teaches that they are separate and distinct alternatives. There is no teaching or suggestion in the Sakuma reference as to how one might integrate the first bit pattern method with the second character estimation method to form a single method. This is not surprising, because it seems apparent that the

Sakuma reference considers the second method inferior to the first method: in systems with a bit pattern memory, the first method is used, even though the second, character-based estimation method could have been used were it advantageous to do so. Therefore, the Sakuma reference teaches away from any combination of the two methods. It is therefore improper for the Office to pick and choose some steps or elements from the first method (e.g. storing the bit pattern in a bit pattern memory), and attempt to combine them with other steps or elements of an incompatible second method (e.g. estimating the ink requirement from that of a single character when there is no bit pattern memory), in order to reject a single claim.

The Motamed reference discloses a multiple-processor raster image processing (RIP) system for processing print instruction files. With regard to the estimation of resource requirements, the Motamed reference teaches:

“[0027] Thumb RIP: A very low resolution RIP that is used specifically for the creation of thumbnail images. The thumb RIP is the processing stage where low resolution images are generated. Two methods implemented for the generation of thumbnails in the preferred embodiment of the invention. The first method uses sub-sampling techniques applied to the full resolution rendered page. In the second method, the rendered page can be generated in multiple formats, e.g. any bit depth per color plane and multiple compression techniques. The thumb RIP is much faster than a full resolution RIP process and requires less system resources than a full resolution RIP. The thumb RIP creates a small thumbnail image for viewing or for other purposes (e.g. toner estimation). It should be appreciated that a thumbnail could also be generated elsewhere in the system.”

It is well-known that a thumbnail image is a reduced-size version of an entire larger image. The Motamed reference teaches creating thumbnail images by a thumb RIP process that produces a very low resolution version of the entire rendered page. Conversely, the sample window of Applicants’ claim 1 recites a window area that is smaller than the entire area of the formatted document in the memory when it is laid out as on print media; in other words, Applicants’ sample window encompasses only a portion of an entire rendered page. Therefore, the Motamed reference, alone or in combination with the Sakuma reference, does not teach or suggest all the limitations of claim 1.

In addition, it is noted that the only teaching in the Motamed reference regarding the estimation of resource requirements is the sentence in the above-cited quotation (also repeated in [0012]) that the small thumbnail image could be used for toner estimation. The

Motamed reference is devoid of anything further on this subject, and thus does not teach or suggest how the small thumbnail image could or might be used to estimate toner usage. Nor does the Sakuma reference remedy this deficiency. Therefore, while it is established that, for 103 purposes, even a non-enabling reference is prior art for whatever it teaches, combining the Motamed reference with the Sakuma reference still would not disclose the overlaying, analyzing, and ascertaining limitations recited in claim 1.

Applicants respectfully traverse the Office's assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the claimed features of Applicants' invention. Such could be possible only in hindsight and in light of Applicants' teachings. Therefore, the rejection is improper at least for that reason and should be withdrawn.

Independent claim 13 (amended), and its dependent claims 15 and 21-24, are patentably distinguishable over the cited references because claim 13 emphasizes the novel features of the present invention which estimate the resource requirements of a print job by performing a low resolution level analysis of a portion of a document. In this regard, claim 13 recites:

“13. A method for ascertaining resource requirements of a print job sent to a printer via a print driver, the method including:
 creating a document of the print job with the print driver and reading the print job into memory directly from the print driver;
 overlaying a sample window over a portion of the document;
performing a low resolution level analysis of only the portion of the formatted document overlayed by the sample window to determine resource requirements of the overlayed portion;
 extrapolating the resource requirements of the overlayed portion to estimate resource requirements of the print job; and
 comparing the estimated resource requirements of the print job to data relating to an availability of the resource and providing an output with response thereto.” (emphasis added)

The Office acknowledges that “Sakuma does not specifically teach providing low resolution analysis with respect to the consumable requirements” (Final Office Action, p.3). However, the Office stated that “Motamed teaches providing low level resolution analysis of a task to estimate toner consumption (paragraphs 0012 and 0027)” (Final Office Action, p.3).

However, as stated above with regard to claim 1, the Motamed reference teaches creating thumbnail images by a thumb RIP process that produces a very low resolution version of the entire rendered page. Conversely, the sample window of Applicants' claim 13 is overlaid over only a portion of the document, and the resource requirements for that portion are extrapolated to estimate the resource requirements of the entire print job. Therefore, the Motamed reference, alone or in combination with the Sakuma reference, does not teach or suggest all the limitations of claim 13.

Applicants respectfully traverse the Office's assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the claimed features of Applicants' invention. Such could be possible only in hindsight and in light of Applicants' teachings. Therefore, the rejection is improper at least for that reason and should be withdrawn.

Independent claim 26 (amended), and its dependent claims 27-29 and 31-32, are patentably distinguishable over the cited references because claim 26 emphasizes the novel features of the present invention which provide code for ascertaining the resource requirements of a print job by analyzing a portion of a document formatted in print format. In this regard, claim 26 recites:

“26. A program stored on a computer readable medium for ascertaining resource requirements of a print job received by a print driver including:
code for creating a document of the print job with the print driver and reading the print job into memory directly from the print driver;
code for formatting the document in the memory into a print format consistent with a layout of the document on print media, the formatted document having a document area;
code for overlaying a sample window over a portion of the formatted document in the memory, the window having a window area smaller than the document area;
code for analyzing the portion of the formatted document overlaid by the sample window to determine resource requirements of the portion; and
code for ascertaining the resource requirements of the print job based on the resource requirements of the portion.”

With regard to claim 26, the Office stated that “the method steps of claim 1 teach all of the program codes of claim 26” (Final Office Action, p.5). Therefore, Applicants refer the Office to the discussion of claim 1 provided heretofore, and respectfully traverse the Office's

assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the claimed features of Applicants' invention. Such could be possible only in hindsight and in light of Applicants' teachings. Therefore, the rejection is improper at least for that reason and should be withdrawn.

Independent claim 34 (amended), and its dependent claims 35-37, are patentably distinguishable over the cited references because claim 34 emphasizes the novel features of the present invention which provide code for estimating the resource requirements of a print job by performing a low resolution level analysis of a portion of a document. In this regard, claim 34 recites:

“34. A program stored on a computer readable medium for ascertaining resource requirements of a print job sent to a printer via a print driver including:
code for creating a document of the print job with the print driver and reading the print job into memory directly from the print driver;
code for overlaying a sample window over a portion of the document;
code for performing a low resolution level analysis of only the portion of the formatted document overlayed by the sample window to determine resource requirements of the overlayed portion;
code for extrapolating the resource requirements of the overlayed portion to estimate resource requirements of the print job; and
code for comparing the estimated resource requirements of the print job to data relating to an availability of the resource and providing an output with response thereto.”

With regard to claim 34, the Office stated that “the method steps of claim 13 teach all of the limitations of claim 34” (Final Office Action, p.9). Therefore, Applicants refer the Office to the discussion of claim 13 provided heretofore, and respectfully traverse the Office's assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the claimed features of Applicants' invention. Such could be possible only in hindsight and in light of Applicants' teachings. Therefore, the rejection is improper at least for that reason and should be withdrawn.

Claims 16-20, 36 and 37 have been rejected under 35 USC Section 103(a), as being unpatentable over U.S. patent 5,663,750 to Sakuma ("Sakuma") in view of published U.S. patent application 2002/0060801 by Motamed et al. ("Motamed") and further in view of U.S.

patent 6,517,175 to Kanaya ("Kanaya"). Applicants respectfully traverse the rejection and request reconsideration based on the amendments to claims 16-19, 36, and 37, and on the dependence of these claims on their respective one of independent claims 13 or 34, whose reasons for allowability over Sakuma and Motamed have been discussed heretofore, and against which Kanaya has not been cited.

Claim 14 has been rejected under 35 USC Section 103(a), as being unpatentable over U.S. patent 5,663,750 to Sakuma ("Sakuma") in view of published U.S. patent application 2002/0060801 by Motamed et al. ("Motamed") and further in view of U.S. patent 5,337,362 to Gormish et al. ("Gormish "). Applicants respectfully traverse the rejection and request reconsideration based on the dependence of this claim on independent claim 13, whose reasons for allowability over Sakuma and Motamed have been discussed heretofore, and against which Gormish has not been cited.

Claims 39-42 are newly added dependent claims which are allowable at least based on the allowability of one of the base claims discussed heretofore.

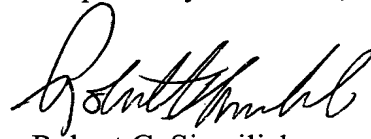
Conclusion

It is believed that all claims presently on file in the subject application are in condition for immediate allowance, and such action is respectfully requested. If it is felt for any reason that direct communication with Applicant's attorney would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned Robert C. Sismilich, Esq. at the below-listed telephone number.

**AUTHORIZATION TO PAY AND PETITION
FOR THE ACCEPTANCE OF ANY NECESSARY FEES**

If any charges or fees must be paid in connection with the foregoing communication (including but not limited to the payment of an extension fee or issue fees), or if any overpayment is to be refunded in connection with the above-identified application, any such charges or fees, or any such overpayment, may be respectively paid out of, or into, the Deposit Account No. 08-2025 of Hewlett-Packard Company. If any such payment also requires Petition or Extension Request, please construe this authorization to pay as the necessary Petition or Request which is required to accompany the payment.

Respectfully submitted,



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